

REMARKS

Objections

The Examiner states that corrected drawings are required because "Figures 1 – 3 have titles in German, and Figures 2 and 3 have legends in German and there are no legends for Figure 4." The Applicant has amended the drawings to include English translations of the German titles and legends in Figures 1 – 3.

Figure 4 is currently labeled with reference numerals in compliance with 37 CFR § 1.84(p). The Applicant submits that legends will unnecessarily clutter the drawing, making it harder to read, and that legends are not necessary for understanding of the drawing (37 CFR § 1.84(o)). Accordingly, Applicant requests reconsideration of the objection to Figure 4.

The Examiner objected to the abstract because it includes the title of the invention. The abstract has been amended to delete the title, and to conform to amended claim 1.

Claims Status

Claims 1-20 are pending. Claim 1 is independent. All the claims stand rejected as follows:

- Claims 1, 3, 7-14, and 17 stand rejected under 102(e) as being anticipated by Partridge et al. (U.S. 6,160,811).
- Claim 2 stands rejected under 103(a) over Partridge in view of Jonsson et al. (U.S. 6,700,888).
- Claim 4 stands rejected under 103(a) over Partridge in view of Lenoski et al. (U.S. 6,747,972), and further in view of Sanu et al. (U.S. 5,974,409).
- Claim 5 stands rejected under 103(a) over Partridge in view of Bremer et al. (U.S. 6,032,190).
- Claims 6 and 16 stand rejected under 103(a) over Partridge in view of Lenoski, and further in view of Cooperman et al. (U.S. 5,721,833).
- Claims 15, and 18-20 stand rejected under 103(a) over Partridge.

Amended Claim 1

Applicant has amended claim 1 to include features of claims 2 – 4 (now canceled). As amended claim 1 recites “a distribution processor for distributing the separated header data among the data processing processors, wherein the distribution processor distributes the header data at least in part on the basis of a priority specified by the header data and the workload of the data processing processors.”

As the Examiner has noted, neither Partridge nor Lenoski teaches distributing the header data on the basis of the workload of the data processing processors. Furthermore, neither reference teaches distributing the header data “on the basis of a priority specified by the header data and the workload of the data processing processors.” The Examiner relied on Sanu for teaching “monitoring the processor load when routing the messages to the server.”

However, one of ordinary skill in the art at the time the invention was made would not have used Sanu's teaching about routing connection query messages to particular search engines to modify Partridge to distribute header data, in part, on the basis of the workload of the data processing processors. First, modifying Partridge to distribute header data of packets among forwarding processors is inconsistent with the disclosure of Partridge. Partridge does describe that “... headers are sent to a selected forwarding engine by the receiving TSU ...” (col. 4, lines 9-10) However, Partridge goes on to say that

...the main function of each of the forwarding engines is to make so-called “next hop” determinations, i.e. to determine the data link through which the packet should be next sent. In making this determination, the forwarding engine utilizes a respective routing table which is loaded into its memory by the network processor 39. The routing table information is preferably complete as to the portion of the network topology which the forwarding engine is to serve. (col. 4, lines 21-29)

Thus, each “forwarding engine” (or “forwarding processor”) in Partridge processes headers of packets destined for a particular portion of the network. So it would be inconsistent to

modify Sanu's router to distribute header data, in part, on the basis of workload of these "forwarding engines" since the choice of which forwarding engine should receive a particular packet has *already* been made by routing table information, as further described in the following passage:

As indicated previously, the architecture of the present invention using multiple forwarding processors means that each such processor needs only that routing table information which is relevant to its own operations which can be limited to a respective portion of the total network to which the overall router is connected.

As indicated previously, the network processor 39 conducts the overall management of the router. In accordance with one aspect of the present invention, it is only in the Network processor 39 that a routing table covering the entire network must be maintained. The network processor loads into each interface card a table of information which allows each TSU (to-switch unit) to identify those types of incoming packets or ATM cells which may arrive at that particular unit. The table of information downloaded from the network processor into the TSU also identifies, for each type of packet expected, a particular one of the forwarding engines which should make the next hop routing decisions for that particular type of packet. (col. 4, lines 46-64)

By way of analogy, Partridge teaches a system in which each floor of a building has a designated mail carrier. When a letter arrives addressed to a particular floor, it is forwarded to the mail carrier for that floor. The proposed modification would change this system so that when a letter arrives addressed to a particular floor, it is given to a less busy mail carrier, even though that mail carrier is assigned to a floor other than that to which the letter is addressed. There is no support for such a radical change to the system disclosed by Partridge.

Second, even if one were to combine the teachings of Sanu and Partridge, the combination would still fail to teach or suggest distributing header data, in part, on the basis of the workload of the data processing processors. Without hindsight, the teaching about distributing connection query messages among search engines running on a server would not suggest distributing header data among processors within a router.

In particular, Sanu describes multiple search engines as “executable programs ... [executing] as separate execution threads in the connection server.” (col. 12, lines 59-64) As best understood, the Examiner considers the claimed “data processing processors” to correspond to the “executable programs” in Sanu. However, even if the connection query messages were sent as packets containing header data and useful data, it does not appear that these “executable programs” actually receive the header data.

Header data typically contains information indicating the network node to which the packet is addressed. It functions like the envelope surrounding a letter. When a letter reaches its destination, the envelope is typically opened and the “payload” of the letter (i.e. the “useful data”) is handed to the recipient. In the same way, when a data packet reaches the network node to which it is addressed, its header is stripped, leaving behind the payload. Thus, it appears that at best, the “executable programs” in Sanu receive only “useful data” from a data packet because any header data would already have been stripped off. Thus, the “executable programs” of Sanu would never receive the header data, as required by the claim.

Thus, amended claim 1 is patentable for at least the reasons explained above.

Cancelled claims

The Applicant has cancelled claims 2 – 4, without prejudice, and has incorporated language from these claims into amended claim 1.

Dependent claims

The dependent claims 5 – 20 are allowable for at least the reasons set forth above for claim 1.

The fact that the Applicant has raised only particular arguments in support of patentability does not imply that there are no other arguments in support of the patentability of the pending claims and additional claims. Also, that the Applicant has declined to address certain positions taken in the Office Action is not meant as acquiescence to those positions, for

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example, related to the teaching of specific references or the grounds for combining multiple references.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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Amendments to the Drawings:

The attached replacement sheets of drawings includes changes to Figs. 1 – 3 and replaces the original sheets including Figs. 1 – 3.

In Figure 1, the German title has been translated to English.

In Figure 2, the German title and legends have been translated to English.

In Figure 3, the German title and legends have been translated to English.

Attachments following last page of this Amendment:

Replacement Sheets (2 pages)